

CHAPTER 2

DESCRIPTION OF ALTERNATIVES

2.1 INTRODUCTION

This chapter summarizes the long-term water service contract negotiations process and descriptions of the alternatives considered in this EA.

2.2 LONG-TERM WATER SERVICE CONTRACT NEGOTIATIONS PROCESS

The CVPIA states that the Secretary of Interior shall, upon request, renew any existing long-term irrigation repayment or water service contract for the delivery of CVP water for a period of 25 years and may renew such contracts for successive periods of up to 25 years each. Consistent with the Act of June 21, 1963, Public Law 88-44 (77 Stat. 68), Municipal and Industrial (M&I) contracts shall be renewed for successive periods of up to 40 years each under terms and conditions that are mutually agreeable. The CVPIA also states that no renewals shall be authorized until appropriate environmental review, including the PEIS, has been completed. The PEIS provided a programmatic environmental analysis and identified the need for site-specific environmental documents for the long-term contract renewal process.

The CVPIA also stated that contracts that expire prior to the completion of the PEIS may be renewed for interim periods. The interim renewal contracts reflect existing Reclamation law, including modifications due to Reclamation Reform Act and applicable CVPIA requirements. The initial interim contract renewals were negotiated in 1994 with subsequent renewals for periods of up to two years to provide for continued water service. Many of the provisions from the interim contracts were assumed to be part of the contract renewal provisions in the description of the PEIS Preferred Alternative.

In 1998, the long-term contract renewal process was initiated. Reclamation reviewed the interim contract provisions that were consistent with Reclamation law and other requirements, comments from the Draft PEIS, and comments obtained during the interim contract renewal process. Reclamation proposed that the provisions of the long-term contract applicable to all water service contractors would be negotiated with

representatives of all CVP water service contractors. Following the acceptance of the CVP-wide provisions, Reclamation proposed that division-specific provisions would be negotiated and contractor-specific provisions would be negotiated. Reclamation also proposed that all water service contracts except for Central San Joaquin Irrigation District, Stockton East Water District, and Colusa Drain Mutual Water Company would be renewed pursuant to this action. Contract renewals for these three contractors would be delayed until the completion of water management studies for their primary sources of CVP water, the Stanislaus River and the Sacramento River.

Reclamation published the initial proposed contract in November 1999. There were several negotiations sessions throughout the next six months. The CVP water service contractors published a counter-proposal in April 2000. The November 1999 proposal represents one “bookend” for negotiations and the April 2000 proposal represents the other “bookend.” The results of the negotiations are reflected in the subsequent proposals. The primary differences between the proposals are summarized in Table 2-1 at the end of this chapter.

2.3 ISSUES CONSIDERED AS PART OF LONG-TERM CONTRACT RENEWALS

The long-term contract renewal process addressed several other issues in addition to the contract provisions. These issues include the needs analyses, changes in service areas, and water transfers.

2.3.1 Needs Analyses

The water rights granted to the CVP by the State Water Resources Control Board (SWRCB) require the Federal government to determine if the water is being used in a beneficial manner. The needs analysis methodology was developed to indicate that the CVP water is being used beneficially. The needs analysis was computed for each contractor within the various divisions or units of the CVP using a multiple-step approach. First, the existing water demand was calculated for each contractor. For agricultural contractors, crop acreage, cropping patterns, crop water needs, effective precipitation, and conveyance losses were reviewed. For M&I contractors, residential, commercial, industrial, institutional, recreational, and environmental uses; landscape coefficients; system losses; and landscape acreage were reviewed. Second, future changes in water demands based upon crops, M&I expansion, and changes in efficiencies were reviewed. Third, existing and future non-CVP water supplies were identified for each contractor including groundwater and other surface water supplies. The initial calculation of CVP water needs was limited by the assumption that groundwater pumping would not exceed the safe yield of the aquifer. In addition, the actual water needs were calculated at each division or unit level to allow for intra-regional transfers on an annual basis.

Beneficial and efficient future water demands were identified for each unit. The demands were compared to available non-CVP water supplies to determine the need for CVP water. If the need was less than contract amounts, the CVP water service contract amount could be reduced. Because the CVP was initially established as a supplemental water supply for areas without adequate supplies, the needs for most contractors are at

least equal to the CVP water service contract and frequently exceeded the previous contract amount. Consequently, this environmental analysis does not include increased total contract amounts and the CVP contract amount will be limited by the existing CVP contract, unless additional water can be provided without harm to other water users and can be stored, delivered, and used consistent with applicable laws, including the Endangered Species Act.

2.3.2 Changes in Water Service Areas

This environmental analysis does not consider future changes in water service area boundaries for use of CVP water. Any future changes to water service area boundaries for use of CVP water will be evaluated in separate technical and environmental analyses.

2.3.3 Water Transfers

Several different types of transfers are considered for long-term contract renewals. Intra-CVP contract transfers have occurred regularly throughout the CVP and are frequently limited to scheduling changes between adjoining districts. Reclamation has historically issued and will continue to address these types of transfers under separate environmental analysis.

It is recognized that water transfers will continue to occur and that the CVP long-term contracts will provide the mechanism. Because CVPIA has allowed these transfers, as evaluated in the PEIS for the Preferred Alternative, the No Action Alternative includes water transfer provisions. These provisions for transfers are also included in both Alternatives 1 and 2. However, it is difficult to identify all of the water transfer programs that could occur with CVP water in the next 25 years. Reclamation will continue to require separate environmental documents for proposed transfers, and will work toward establishing criteria and protocols to allow rapid technical and environmental review of future proposed transfers.

2.4 DEVELOPMENT OF ALTERNATIVES

Three alternatives were identified for the renewal of long-term contracts between Reclamation and the Sacramento River Division contractors. The alternatives present a range of water service agreement provisions that could be implemented for long-term contract renewals. The No Action Alternative consists of renewing existing water service contracts as described by the Preferred Alternative of the PEIS. In November 1999, Reclamation published a proposed long-term water service contract. In April 2000, the CVP Contractors presented an alternative long-term water service contract. Reclamation and the CVP Contractors continued to negotiate the CVP-wide terms and conditions with these proposals serving as “bookends.” This EA also considers these proposals with the No Action Alternative as bookends to be considered for the environmental documentation to evaluate the impacts and benefits of the renewing long-term water service contracts.

2.4.1 No Action Alternative

The No Action Alternative assumes renewal of long-term CVP water service contracts for a period of 25 years in accordance with implementation of CVPIA as described in

the PEIS Preferred Alternative. The PEIS Preferred Alternative assumed that most contract provisions would be similar to many of the provisions in the 1997 CVP Interim Renewal Contracts, which included contract terms and conditions consistent with applicable CVPIA requirements. In addition, the No Action Alternative assumes tiered pricing provisions and environmental commitments as described in the PEIS Preferred Alternative. The provisions of the No Action Alternative are summarized in Table 2-1. These provisions were described in the Final PEIS.

Several applicable CVPIA provisions are summarized in the description of the No Action Alternative as they are addressed in a different manner in Alternatives 1 and/or 2, and therefore could result in changes in environmental impacts or benefits. These issues include tiered water pricing, definition of M&I water users, water measurement, and water conservation.

Tiered Water Pricing. Tiered water pricing in the No Action Alternative is based upon use of a “80/10/10 Tiered Water Pricing from Contract Rate to Full Cost Rate” including appropriate Ability-to-Pay limitations. Under this approach, the first 80% of the maximum contract total would be priced at the applicable Contract Rate. The next 10% of the contract total would be priced at a rate equal to the average of the Contract Rate and Full Cost Rate. The final 10% of the contract total would be priced at Full Cost Rate. The terms “Contract Rate” and “Full Cost Rate” are defined by the CVP rate-setting policies, P.L. 99-546, and the Reclamation Reform Act (RRA), respectively. The Contract Rate for irrigation and M&I water includes the contractor’s allocated share of CVP main project operations and maintenance (O&M), O&M deficit, if any, and capital cost. The contract rate for irrigation water does not include interest on capital. The contract rate for M&I water includes interest on capital computed at the CVP M&I interest rate. The Full Cost rate for irrigation and M&I water includes interest at the RRA interest rate.

In addition to the CVP water rate, contractors are required to pay a Restoration Charge on all deliveries of CVP water. Reclamation law and policy provides full or partial relief to irrigation contractors on Restoration Charges and the capital rate component of the water rate and is based upon local farm budgets. Ability-to-Pay relief, relative to the irrigation water rate, is fully applicable only to the first 80% of the contract total. Ability-to-Pay relief is not applicable to the third tier water rate. The second tier may reflect partial Ability-to-Pay relief, as it is equal to the average of the first and third tiers. The Ability-to-Pay law and policy do not apply to CVP O&M costs, municipal or industrial water rates, CVP distribution facilities, or non-CVP water costs.

The prices of CVP water used in the No Action Alternative are based upon 1994 irrigation and municipal/industrial CVP water rates.

Definition of Municipal and Industrial Users. The definition of M&I users was established in portions of a 1982 Reclamation policy memorandum. In many instances, the definition of municipal users is easily definable. However, with respect to small tracts of land, the 1982 memorandum identified agricultural water as agricultural water

service to tracts that can support \$5,000 gross income for a commercial farm operation. The memorandum indicates that this criterion can be generally met by parcels greater than 2 acres. Based on this analysis, the CVP has generally applied a definition of five acres or less for M&I uses in the CVP for many years. The CVP contractors can seek a modification for a demonstrated need of agricultural use on parcels between two and five acres in size and request such a modification from the Contracting Officer.

Water Measurement. The No Action Alternative includes water measurement at every agriculture turnout or M&I service connection to measure CVP water deliveries. It is assumed that if other sources are commingled with the CVP water, including groundwater or other surface waters, that the measurement devices would report gross water deliveries. Additional calculations would be required to determine the exact quantity of CVP water. However, if groundwater or other surface waters are delivered by other means to the users, the No Action Alternative did not include additional measurement devices except as required by individual users' water conservation plans.

Water Conservation. The water conservation assumptions in the No Action Alternative include water conservation actions for municipal and on-farm uses assumed in the DWR Bulletin 160-93; and conservation plans completed under the 1982 Reclamation Reform Act consistent with the criteria and requirements of the CVPIA. Such criteria address cost-effective Best Management Practices that are economical and appropriate, including measurement devices, pricing structures, demand management, public information, and financial incentives.

2.4.2 Alternative 1

Alternative 1 is based upon the proposal presented by CVP water service contractors to Reclamation in April 2000. However, there were several issues included in the April 2000 proposal that could not be included in Alternative 1 because they are not consistent with existing Federal or state requirements or would require a separate Federal action, as described below.

- The April 2000 proposal includes Terms and Conditions to provide a highly reliable water supply, and provisions to improve the water supply capabilities of the CVP facilities and operations to meet this goal - *These issues were not included in Alternative 1 because these issues would require additional Federal actions with separate environmental documentation and also limit the Secretary's obligation to achieve a reasonable balance among competing demands as required by the CVPIA. Currently Reclamation is completing the least cost plan to restore project yield in accordance with Section 3408(j) of CVPIA and under the CALFED program.*
- The April 2000 proposal includes language to require renewal of contracts after 25 years upon request of the contractor - *The study period for this EA is 25 years which coincides with the contract period applicable to irrigation contracts and required by CVPIA. Renewal after 25 years would be a new Federal Action and would require new environmental documentation.*

- The April 2000 proposal did not include provisions for compliance with biological opinions - *Biological consultations are required by the Consultation and Coordination requirements established by Executive Order for all Reclamation activities. These are binding on Reclamation and provisions are needed to address this requirement.*
- The April 2000 proposal included provisions for water transfers - *It is recognized that water transfers will continue and that the CVP long-term contracts will provide the mechanisms for the transfers. However, it would be difficult to identify all of the water transfer programs that could occur with CVP water in the next 25 years. Reclamation would continue with separate environmental documents for transfers, and will establish criteria for rapid technical and environmental review of proposed transfers.*
- The April 2000 proposal includes provisions for transfer of O&M requirements - *It is recognized that transfers of operation and maintenance to the group of contractors will continue and that the CVP long-term contracts will provide the mechanisms for such transfers. However, it would be difficult to identify all of the operation and maintenance transfer programs that could occur with CVP water in the next 25 years. Reclamation would require separate environmental documents for such transfers.*
- The April 2000 proposal includes provisions for resolution of disputes - *Assumptions for resolution of disputes were not included in Alternative 1 and at this time would not appear to affect environmental conditions.*
- The April 2000 proposal includes provisions for expansion of the CVP service areas by the existing CVP water contractors - *The study area for the long-term contract renewal process is defined by the existing service area boundaries. Expansion of the service area boundaries would be a new Federal Action and would require separate environmental documentation.*

The April 2000 proposal did include several provisions that were different than the assumptions for No Action Alternative and those provisions are included in Alternative 1, as summarized in Table 2-1. The April 2000 proposal also included several provisions that involve specific language changes that would not significantly modify CVP operations in a manner that would affect the environment as compared to the No-Action Alternative but could affect specific operations of a contractor, as described in Table 2-1.

It should be noted that the tiered pricing requirements (including unit prices for CVP water) and definition of M&I users in Alternative 1 would be the same as in the No Action Alternative.

2.4.3 Alternative 2

Alternative 2 is based upon the proposal presented by Reclamation to CVP water service contractors in November 1999. However, there were several provisions included in the November 1999 proposal that are not going to be included in Alternative 2. These provisions would constitute a separate Federal action, as described below.

- The November 1999 proposal includes provisions for the contractor to request approval from Reclamation of proposed water transfers - *Water transfers were not included in Alternative 2 because such actions cannot be definitely described at this time, and essentially constitute a separate Federal action and require separate environmental documentation.*
- The November 1999 proposal includes provisions for transfer of O&M to third parties - *Operations and maintenance transfers were not included in Alternative 2 because these actions would be a separate Federal action and require separate environmental documentation.*

The November 1999 proposal did include several provisions that were different than the assumptions for No Action Alternative and included in Alternative 2, as summarized below and in Table 2-1. The primary differences are related to tiered pricing and the definition of M&I users.

Tiered Water Pricing. Tiered water pricing in Alternative 2 is based upon a definition of “Category 1” and “Category 2” water supplies. “Category 1” is defined as the quantity of CVP water that is reasonably likely to be available for delivery to a contractor and is calculated on an annual basis as the average quantity of delivered water during the most recent five year period. For the purposes of this Alternative, the “Category 1” water supply is defined as the “contract total.” “Category 2” is defined as that additional quantity of CVP water in excess of Category 1 water that may be delivered to a contractor in some years. Under Alternative 2, the first 80% of Category 1 volume would be priced at the applicable Contract Rate for the CVP. The next 10% of the Category 1 volume would be priced at a rate equal to the average between the Contract Rate and Full Cost Rate as defined by Reclamation law and policy. The final 10% of the Category 1 volume would be priced at the Full Cost Rate as required by the CVPIA. All Category 2 water, when available, would be priced at Full Cost Rate. It should be noted that Category 1 and Category 2 volumes will change every year based upon the average deliveries for the “most recent five years,” with limited exception, based upon the findings of the water needs assessment. Alternative 2 assumes the sum of Category 1 and Category 2 water is equal to the maximum quantity included in the contractors’ existing water service contract. The quantity is the same as the No Action Alternative and Alternative 1. The terms “Contract Rate” and “Full Cost Rate” are discussed under Tiered Pricing for the No Action Alternative. The same Ability-to-Pay adjustments would be applicable to Restoration Charges and tiered water rates as described in the No Action Alternative.

The prices of CVP water used in Alternative 2 are based upon irrigation and M&I CVP water rates presented in the November 17, 1999 Financial Workshop Handouts 1 and 2.

Definition of Municipal and Industrial Users. The definition of M&I water includes all tracts less than or equal to five acres unless the Contracting Officer is satisfied that the use of such water meets the definition of “Irrigation Water.”

2.5 ALTERNATIVES CONSIDERED BUT ELIMINATED

2.5.1 Nonrenewal of Long-term Contracts

Nonrenewal of existing contracts is considered infeasible based on Section 3404(c) of the CVPIA. This alternative was considered but eliminated from analysis in this EA because Reclamation has no discretion not to renew the contracts.

2.5.2 Reduction in Contract Amounts

Reduction of contract amounts was considered in certain cases but rejected from analysis. The reason for this is twofold. First, water-needs analyses have been completed for all contracts and in almost all cases the needs exceed or equal the current total contract amount. Secondly, in order to implement good water management, the contractors need to be able to store or immediately use water available in wetter years when more water is available. By quantifying contract amounts in terms of the needs analyses and the CVP delivery capability, the contractors can make their own economic decisions. Allowing the contractors to retain the full water quantity gives the contractors assurance that the water will be available to them for storage investments. In addition the CVPIA, in and of itself, achieves a balance in part through its dedication of significant amounts of CVP water, and actions to acquire water for environmental purposes.

2.6 SELECTION OF THE PREFERRED ALTERNATIVE

It is anticipated that the final contract language and the long-term contract renewal Preferred Alternative will represent a negotiated position between Alternatives 1 and 2. Therefore, it is anticipated that the impacts will be either equal to or less than those identified for Alternative 1, Alternative 2, or No Action Alternative.

2.7 SUMMARY OF CONCLUSIONS

Potential impacts associated with implementing the No Action Alternative, Alternative 1, and Alternative 2 are listed in Table 2-2 and described in detail in Chapter 3 of this EA. As shown in Table 2-2, no significant impacts would occur with implementation of these alternatives.

Table 2-1
Comparison of Contract Provisions Considered in Alternatives

Provision	No Action Alternative Based on PEIS and Interim Contracts	Alternative 1 Based on April 2000 Proposal by Contractors	Alternative 2 Based on November 1999 Proposal by Reclamation
Explanatory Recitals	<p>Assumes water rights held by CVP from SWRCB for use by water service contractors under CVP policies</p> <p>Assumes that CVP is a significant part of the urban and agricultural water supply</p> <p>Assumes increased use of water rights; the need to meet water quality standards and fish protection measures, and other measures that constrain the use of CVP water</p> <p>Assumes the need for the 3408(j) study</p> <p>Assumes that loss of water supply reliability would have impact on socioeconomic conditions and change land use</p>	<p>Assumes CVP Water Right as being held in trust for project beneficiaries that may become the owners of the perpetual right.</p> <p>Assumes CVP as a significant, essential, and irreplaceable part of the urban and agricultural water supply</p> <p>Assumes that CVPIA impaired ability of CVP to deliver water</p> <p>Assumes implementation of yield increase projects per 3408(j) study</p> <p>Assumes that loss of water supply reliability would have significant adverse socioeconomic and environmental impacts in CVP service area</p>	<p>Same as No Action Alternative</p> <p>Same as No Action Alternative</p> <p>Same as No Action Alternative</p> <p>Same as No Action Alternative</p> <p>Same as No Action Alternative</p>
Definitions			
“Charges”	Charges defined as payments required in addition to Rates	Assumes rewording of definition of Charges to exclude both Rates and Tiered Pricing Increments	Same as No Action Alternative
“Category 1 and Category 2”	Tiered Pricing as in PEIS	Not included	Tiered Pricing for Categories 1 and 2
“Contract Total”	Contract Total described as Total Contract	Same as No Action Alternative	Described as basis for Category 1 to calculate Tiered Pricing
“Landholder”	Landholder as described in existing Reclamation Law	Assumes rewording to specifically define Landholder with respect to ownership, leases, and operations	Assumes rewording to specifically define Landholder with respect to ownership and leases

Table 2-1
Comparison of Contract Provisions Considered in Alternatives *(continued)*

Provision	No Action Alternative Based on PEIS and Interim Contracts	Alternative 1 Based on April 2000 Proposal by Contractors	Alternative 2 Based on November 1999 Proposal by Reclamation
“M&I Water”	Assumes rewording to provide water for irrigation of land in units less than or equal to five acres as M&I water unless Contracting Officer satisfied use is irrigation	M&I water described for irrigation of land in units less than or equal to two acres	Same as No Action Alternative
Terms of Contract - Right to Use Contract	Assumes that contracts may be renewed	States that contract shall be renewed	Same as No Action Alternative
	Assumes convertibility of contract to a 9(d) contract same as existing contracts	Includes conditions that are related to negotiations of the terms and costs associated with conversion to a 9(d) contract	Same as No Action Alternative
Water to be Made Available and Delivered to the Contractor	Assumes water availability in any year with existing conditions. Assumes water delivery per contract requirements, if available.	Similar to No Action Alternative	Actual water availability in a year is unaffected by Categories 1 and 2
	Assumes compliance with Biological Opinions and other environmental documents for contracting	Not included	Same as No Action Alternative
	Assumes that current operating policies strive to minimize impacts to CVP water users	Assumes that CVP operations will be conducted in a manner to minimize shortages and studies to increase yield shall be completed with necessary authorizations	Same as No Action Alternative
Time for Delivery of Water	Assumes methods for determining timing of deliveries as in existing contracts	Assumes minor changes related to timing of submittal of schedule	Same as No Action Alternative
Point of Diversion and Responsibility for Distribution of Water	Assumes methods for determining point of diversion as in existing contracts	Assumes minor changes related to reporting	Same as No Action Alternative
Measurement of Water Within District	Assumes measurement for each turnout or connection for facilities that are used to deliver CVP water as well as other water supplies	Assumes measurement at delivery points	Assumes similar actions in No Action Alternative but applies to all water supplies
Rates and Method of Payment for Water	Assumes Tiered Pricing is total water quantity. Assumes advanced payment for rates for two months.	Assumes Tiered Pricing is total water quantity. Assumes advanced payment for rates for one month.	Assumes Tiered Pricing is total water quantity. Assumes advanced payment for rates for six months.

Table 2-1
Comparison of Contract Provisions Considered in Alternatives *(continued)*

Provision	No Action Alternative Based on PEIS and Interim Contracts	Alternative 1 Based on April 2000 Proposal by Contractors	Alternative 2 Based on November 1999 Proposal by Reclamation
Non-interest Bearing Operation and Maintenance Deficits	Assumes language from existing contracts	Same as No Action Alternative	Same as No Action Alternative
Sales, Transfers, or Exchanges of Water	Assumes continuation of transfers with the rate for transferred water being the higher of the sellers' or purchasers' CVP cost of service rate	Assumes continuation of transfers with the rate for transferred water being the purchasers' CVP cost of service rate	Same as No Action Alternative
Application of Payments and Adjustments	Assumes payments will be applied as in existing contracts	Assumes minor changes associated with methods described for overpayment	Same as No Action Alternative
Temporary Reduction - Return Flows	Assumes that current operating policies strive to minimize impacts to CVP water users	Assumes minor changes associated with methods described for discontinuance or reduction of payment obligations	Same as No Action Alternative
Constraints on Availability of Project Water	Assumes that current operating policies strive to minimize impacts to CVP water users	Assumes Contractors do not consent to future Congressional enactments which may impact	Same as No Action Alternative
Unavoidable Groundwater Percolation	Assumes that some of applied CVP water will percolate to groundwater	Same as No Action Alternative	Same as No Action Alternative
Rules and Regulations	Assumes that CVP will operate in accordance with then existing rules	Assumes minor changes with right to non-concur with future enactments retained by Contractors	Same as No Action Alternative
Water and Air Pollution Control	Assumes that CVP will operate in accordance with then existing rules	Same as No Action Alternative	Same as No Action Alternative
Quality of Water	Assumes that CVP will operate in accordance with existing rules without obligation to operate towards water quality goals	Same as No Action Alternative	Same as No Action Alternative
Water Acquired by the Contractor Other than from the United States	Assumes that CVP will operate in accordance with existing rules	Assumes changes associated with payment following repayment of funds	Same as No Action Alternative
Opinions and Determinations	PEIS recognizes that CVP will operate in accordance with existing rules	Assumes minor changes with respect to references to the right to seek relief	Same as No Action Alternative
Coordination and Cooperation	Not included	Assumes that coordination and cooperation between CVP operations and users should be implemented and CVP users should participate in CVP operational decisions	Not included

Table 2-1
Comparison of Contract Provisions Considered in Alternatives *(continued)*

Provision	No Action Alternative Based on PEIS and Interim Contracts	Alternative 1 Based on April 2000 Proposal by Contractors	Alternative 2 Based on November 1999 Proposal by Reclamation
Charges for Delinquent Payments	Assumes that CVP will operate in accordance with existing rules	Same as No Action Alternative	Same as No Action Alternative
Equal Opportunity	Assumes that CVP will operate in accordance with existing rules	Same as No Action Alternative	Same as No Action Alternative
General Obligation	Assumes that CVP will operate in accordance with existing rules	Similar to No Action Alternative	Same as No Action Alternative
Compliance with Civil Rights Laws and Regulations	Assumes that CVP will operate in accordance with existing rules	Same as No Action Alternative	Same as No Action Alternative
Privacy Act Compliance	Assumes that CVP will operate in accordance with existing rules	Same as No Action Alternative	Same as No Action Alternative
Contractor to Pay Certain Miscellaneous Costs	Assumes that CVP will operate in accordance with existing rules	Similar to No Action Alternative	Same as No Action Alternative
Water Conservation	Assumes compliance with conservation programs established by Reclamation and the State	Assumes conditions similar to No Action Alternative with the ability to use State standards which may or may not be identical to Reclamation's requirements	Same as No Action Alternative
Existing or Acquired Water or Water Rights	Assumes that CVP will operate in accordance with existing rules	Same as No Action Alternative	Same as No Action Alternative
Operation and Maintenance by Non-federal Entity	Assumes that CVP will operate in accordance with existing rules and no additional changes to operation responsibilities under this alternative	Assumes minor changes to language that would allow subsequent modification of operational responsibilities	Assumes minor changes to language that would allow subsequent modification of operational responsibilities
Contingent on Appropriation or Allotment of Funds	Assumes that CVP will operate in accordance with existing rules	Assumes minor changes to language	Same as No Action Alternative
Books, Records, and Reports	Assumes that CVP will operate in accordance with existing rules	Assumes changes for record keeping for both CVP operations and CVP users	Same as No Action Alternative
Assignment Limited	Assumes that CVP will operate in accordance with existing rules	Assumes changes to facilitate assignments	Same as No Action Alternative
Severability	Assumes that CVP will operate in accordance with existing rules	Same as No Action Alternative	Same as No Action Alternative
Resolution of Disputes	Not included	Assumes a Dispute Resolution Process	Not included
Officials Not to Benefit	Assumes that CVP will operate in accordance with existing rules	Same as No Action Alternative	Same as No Action Alternative

Table 2-1
Comparison of Contract Provisions Considered in Alternatives *(continued)*

Provision	No Action Alternative Based on PEIS and Interim Contracts	Alternative 1 Based on April 2000 Proposal by Contractors	Alternative 2 Based on November 1999 Proposal by Reclamation
Changes in Contractor's Service Area	Assumes no change in CVP water service areas absent Contracting Officer consent	Assumes changes to limit rationale used for non-consent and sets time limit for assumed consent	Same as No Action Alternative
Notices	Assumes that CVP will operate in accordance with existing rules	Same as No Action Alternative	Same as No Action Alternative
Confirmation of Contract	Assumes Court confirmation of contract	Not included - Assumption is Court confirmation not required	Same as No Action Alternative

**Table 2-2
Summary of Potential Impacts**

Resource	No Action Alternative	Alternative 1	Alternative 2
Agricultural Economics	Colusa County and Orland-Artois water districts would have to pay the highest Full-Cost-Rate of any of the Sacramento River Division contractors if tiered pricing were adopted.	Same as under the No Action Alternative.	The Davis and Kirkwood water districts on the Tehama-Colusa Canal and the Corning Water District on the Corning Canal would have the largest dollar increases in water rates in the West Sacramento Valley.
	Total irrigated acreage within the service area is projected to be approximately 95,000 acres in 2030, under average hydrologic conditions, and approximately 82,000 acres in 2030, under dry hydrologic conditions.	Same as under the No Action Alternative.	About 65,000 acres, or approximately 68 percent of the service area, is projected to be fallowed in an average hydrologic year following five dry hydrologic years, in response to water costs. Model runs imply that there would be no incremental impacts on irrigated acreage within the affected districts in a dry year following five years of either dry, average, or wet hydrologic conditions, when compared to the No Action Alternative in a year of dry hydrologic conditions.
	Total Gross Value of Production is projected to be \$73 million dollars in 2030 under average hydrologic conditions and \$66 million dollars in dry hydrologic conditions.	Same as under the No Action Alternative.	In an average hydrologic year following five dry hydrologic years, about \$40 million, or almost 55 percent of the area's total projected gross value of production of about \$73 million dollar, would be lost (in 1999 dollar terms). In addition, there would be a total decline in net farm revenue of about \$2.7 million. These impacts would derive entirely from increased CVP water rates relative to No Action.
	Total regional economic output (in 1991 terms) was approximately \$2.6 billion, with about 38,300 full-time equivalent jobs and about \$1.1 billion of income.	Same as under the No Action Alternative.	In a dry year following five years of dry hydrologic conditions related to the No Action Alternative in a year of dry hydrologic conditions, there would be a loss of net farm revenues of about \$400,000. These impacts would derive entirely from increased CVP water rates relative to No Action.

Table 2-2
Summary of Potential Impacts *(continued)*

Resource	No Action Alternative	Alternative 1	Alternative 2
			<p>The agricultural output in the Tehama-Colusa-Glenn county area could decrease by about 5 percent, while overall industrial output would be expected to decrease by about 3.2 percent from No Action levels. Overall employment in the region would be expected to decrease by about 2.6 percent, and overall income by place of work in the region would be expected to decrease by about 3.8 percent.</p>
Water Resources	<p>Minimal changes in average water use over time are expected, with short term fluctuations greater in magnitude than the long-term change.</p> <p>Reductions in CVP deliveries are likely to lead to local, short-term increases in groundwater use. Reductions in irrigation are also likely to result in reductions in groundwater recharge, affecting down gradient farmers.</p>	Same as under No Action Alternative.	<p>When a sequence of dry years is followed by an average year, water purchases by the contractors could be greatly reduced, and might drive some contractors out of business.</p> <p>Groundwater use would be localized in areas with substantial groundwater resources.</p>
Land Use Resources	Total irrigated acreage within the service area is projected to be approximately 95,300 acres in 2030, under average hydrologic conditions.	Same as under No Action Alternative.	<p>Implementing Alternative 2 would not have a direct effect on land uses.</p> <p>Loss of 65,000 irrigated acres would be at least a substantial, temporary land use change.</p>

Table 2-2
Summary of Potential Impacts *(continued)*

Resource	No Action Alternative	Alternative 1	Alternative 2
Biological Resources	Winter-run, Spring-run and Fall/Late fall-run Chinook salmon and Central Valley steelhead would be negatively affected by RBDD operations and water diversion in the Sacramento River Division. A fish screen exists at the RBDD which reduces entrainment impacts.	Same as under No Action Alternative.	Same as under No Action Alternative plus additional impacts on species and habitat affected by a reduction in agricultural lands. Loss of 20,000 acres of rice and small grain production would reduce food sources for special status species, such as the sandhill crane, and would reduce habitat sources for such species as the giant garter snake, by about 5% in the Sacramento Valley. The reduction of return flows associated with the loss of 65,000 irrigated acres would have a local impact on habitat and species in wetland and riparian areas fed by these flows.
Social Conditions and Environmental Justice	There should be no significant impact on population, income, or employment levels or predicted growth in Colusa, Glenn, and Tehama counties from implementing the No Action Alternative. Minority or low-income populations would not be disproportionately affected by implementing the No Action Alternative.	Same as under No Action Alternative.	The precise outcome of the increase in water prices would probably vary from farm to farm; however, it is probable that agricultural employment levels in each district would drop under the worst-case scenario of an average hydrologic year following five dry years. Direct and indirect impacts to employment are possible, but overall impacts to the Sacramento Valley region are not likely to be large because employment levels are increasing and most of the increase is expected outside the agricultural sector. Any negative impact on agricultural employment would be reflected in the migrant farm worker community, which is predominately minority and low-income.
Recreational Resources	No impacts to the use or enjoyment of recreational opportunities in the project vicinity are expected under the No Action Alternative.	Same as under No Action Alternative.	Recreation opportunities in the TCC and Corning Canal project area and vicinity are expected to remain unchanged.

Table 2-2
Summary of Potential Impacts *(continued)*

Resource	No Action Alternative	Alternative 1	Alternative 2
Indian Trust Assets	No impacts to Indian Trust Assets would occur.	Same as under No Action Alternative.	Same as under No Action Alternative.
Cultural Resources	<p>No direct impacts to cultural resources would be expected under the No Action Alternative.</p> <p>Indirect impacts could result if it were to lead to changes in agricultural practices or land use. However, the No Action Alternative would be expected to have a small potential for influencing decisions on future agricultural practices and land use.</p>	Same as under No Action Alternative.	<p>Anticipated changes to cultural resources could result from removing land from agricultural production.</p> <p>If land currently planted is left fallow, there may be a beneficial effect to preserving archaeological resources; however, if this land is not managed to prevent erosion, there could be impacts to archaeological resources. If land taken out of agricultural use is developed for commercial, industrial, or residential uses, there could be impacts related to ground-disturbing activities.</p>
Geology and Soils	Under prolonged dry conditions, some of the marginally productive lands might be permanently withdrawn from irrigation. Fallowing and permanent withdrawal of land that has been cultivated could result in increased potential for soil erosion, if the land were not managed to prevent it.	Same as under No Action Alternative.	If approximately 65,000 acres were taken out of irrigation, it would likely have a severe effect on soils. If large tracts of land were taken out of irrigation relatively rapidly, it would be difficult to manage the land to prevent erosion.
Air Quality	There would be no net increase in emissions and therefore No Action would not be subject to the Clean Air Act conformity rule.	Same as under No Action Alternative.	The predicted change in cropping patterns is anticipated to result in increases in ozone precursor emissions (from fugitive dust). However, the indirect effects of altered crop patterns on air pollutant emissions are not expected to have a noticeable impact on overall air quality conditions in the Sacramento Valley.
Visual Resources	Anticipated changes to agricultural viewsheds under the No Action Alternative would be minimal.	Same as under No Action Alternative.	Agricultural viewsheds under Alternative 2 would be similar to existing conditions and the impact would be minimal.